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便利5G發展

在多段頻帶提供頻譜

5G具有高速、高容量、高可靠、大規模連接和低時延通訊等尖端技術特性，革新了流動服務用戶的使用體驗。5G為各行各業和智慧城市的應用帶來巨大發展潛力，例如智能監測、關鍵實時遙距操作、遠程醫療及智能運輸。

通訊局在2019年適時把3.3吉赫、3.5吉赫、4.9吉赫，以及26吉赫及28吉赫頻帶內共1 980兆赫的無線電頻譜指配作公共流動電訊服務用途，包括提供5G服務。流動網絡營辦商由2020年4月1日起在香港推出商用5G服務。截至2022年3月，香港5G覆蓋率已超過九成，在核心商業區的覆蓋率更達99%，涵蓋市區主要地點及港鐵全線。

- ***提供更多5G頻譜以滿足營辦商的需求***

為滿足各項5G應用對速度、容量和覆蓋範圍與日俱增的需求，通訊辦協助通訊局向市場供應更多不同頻帶的頻譜。繼通訊局和商經局局長於2021年3月30日以聯合聲明的方式公布就可供5G服務使用的新增頻譜的編配和指配安排，以及相關頻譜使用費的決定，通訊辦於2021年10月舉行了一場頻譜拍賣，並按照拍賣結果，協助通訊局於2021年12月指配4.9吉赫頻帶內80兆赫的頻譜，並於2022年6月指配700兆赫頻帶內70兆赫的頻譜。

- ***修訂就26吉赫及28吉赫頻帶內指配頻譜的網絡及服務責任***

三家現有流動網絡營辦商於2019年4月在26吉赫及28吉赫頻帶內各獲指配400兆赫頻譜，以提供大規模公共流動服務。根據網絡及服務責任，他們須分三個階段，即2022年4月、2023年4月及2024年4月或之前，各自完成設置和營運合共2 500個無線電裝置。由於支援26吉赫及28吉赫頻帶的相關網絡設備和手機的供應較預期延遲，該三家流動網絡營辦商於2021年4月共同向通訊局提出要求，將各個網絡及服務里程碑延後兩年。經考慮該三家流動網絡營辦商提出的要求和通訊辦的評估後，通訊局於2021年11月決定修訂向他們施加的網絡及服務責任，將三個網絡及服務里程碑各延後兩年，即由2022－24年延至2024－26年。儘管通訊局將里程碑延後，最少須設置和營運合共2 500個無線電裝置的要求維持不變。

實施鼓勵及早使用5G技術資助計劃

通訊辦於2020年5月推行由政府透過「防疫抗疫基金」推出的「鼓勵及早使用5G技術資助計劃」。該計劃旨在鼓勵各行各業及早使用5G技術，以提升效率、生產力和服務質素。在此計劃下，每個獲批的項目可獲資助與使用5G技術直接相關的實際開支的50%，上限為港幣50萬元。政府已為該計劃預留合共港幣一億元的撥款。

Facilitating 5G Developments

Making Spectrum Available in Multiple Frequency Bands

The adoption of 5G technology revolutionises mobile users' experience with cutting-edge technical capabilities for high speed, high capacity, high reliability, massive connectivity and low latency communications. 5G opens up vast potential for various commercial and smart city applications such as smart surveillance, time-critical remote operation, telemedicine and intelligent transportation.

In 2019, the CA assigned a total of 1 980 MHz of radio spectrum in the 3.3 GHz, 3.5 GHz, 4.9 GHz, and 26 GHz and 28 GHz bands in a timely manner for public mobile telecommunications use, including the provision of 5G services. MNOs launched their commercial 5G services in Hong Kong starting from 1 April 2020. As of March 2022, 5G coverage in Hong Kong had reached over 90% and even up to 99% in core business districts, covering major locations in the urban areas and all MTR lines.

- *Making Available Additional 5G Spectrum to Meet the Demand of Operators*

In order to meet the growing needs of various 5G applications in terms of speed, capacity and coverage, OFCA supported the CA to release more spectrum in different frequency bands to the market. Following the promulgation of the decisions of the CA and SCED by way of joint statements on 30 March 2021 on the arrangements for frequency allocation and assignment of additional spectrum for 5G services, and the related spectrum utilisation fee (SUF), OFCA conducted a spectrum auction in October 2021 and assisted the CA in assigning 80 MHz of spectrum in the 4.9 GHz band in December 2021, and 70 MHz of spectrum in the 700 MHz band in June 2022 according to the auction results.

- *Amendments of Network and Service Rollout Obligations for Spectrum Assigned in the 26 GHz and 28 GHz Bands*

Three incumbent MNOs were each assigned 400 MHz of spectrum in the 26 GHz and 28 GHz bands for the provision of large scale public mobile services in April 2019. They were each under a network and service obligation to install and put into use a total of 2 500 radio units in three phases, by April 2022, April 2023 and April 2024 respectively. In April 2021, the three MNOs made a joint request to the CA on postponement to fulfil the network and service rollout milestones by two years, due to the later-than-expected availability of the relevant network equipment and handsets supporting the 26 GHz and 28 GHz bands. Taking into account the MNOs' submission and OFCA's assessment, the CA decided in November 2021 to amend the network and service rollout obligations imposed on them by postponing each of the three network and service rollout milestones by two years from 2022–24 to 2024–26. Notwithstanding the postponement of the milestones, the total minimum number of 2 500 radio units required to be installed and put into use remains unchanged.

Implementation of the Subsidy Scheme for Encouraging Early Deployment of 5G

OFCA implemented the "Subsidy Scheme for Encouraging Early Deployment of 5G" launched by the Government under the Anti-epidemic Fund in May 2020. The scheme aims to encourage early deployment of 5G technology across trades and

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計劃自推出以來，反應十分踴躍。截至2022年8月31日，合共已有152份申請獲批，涵蓋不同行業，包括建造、設計、教育、環保、電競及休閒、活動及展覽、金融、物流、醫療及保健、物業及設施管理、維修保養、市場營銷、電訊、紡織及交通運輸。

為進一步鼓勵公私營機構利用5G技術促進持續創新，政府已延長申請期至2022年12月31日，通訊辦會繼續支援計劃的運作。

5G技術亦可用在建造、物業及設施管理，以提升效率和服務質素。
5G technology can also apply to construction, property and building facilities management which helps enhance efficiency and quality of service.

實施擴展光纖網絡至偏遠地區鄉村資助計劃

為配合政府的政策，通訊辦現正推行一項獲撥款港幣7.7億元的資助計劃，為固網營辦商提供經濟誘因以擴展光纖網絡至新界及離島九個地區共235條鄉村。該等鄉村遠離固網營辦商現有光纖主幹網，村民只可選用透過銅線網絡提供、速度只有每秒10兆比特或以下的寬頻服務。

通訊辦把該235條鄉村組合成六個投標項目（即投標項目一至投標項目六）進行招標。獲選的固網營辦商須鋪設光纖連接線路至相關鄉村的村口位置，以及鋪設三條海底光纖電纜，分別連接香港島至南丫島（投標項目五）及連接大嶼山至長洲和大嶼山至坪洲（投標項目六）。為引入市場競爭，獲選的固網營辦商須開放獲資助鋪設的網絡設施，以及海底光纖電纜至少一半的容量予其他固網營辦商免費使用。

隨着計劃的六個投標項目在2019年11月至2020年5月期間悉數批出，截至2022年8月31日，獲選的固網營辦商已把光纖網絡擴展至67條鄉村，預期於2026年前光纖網絡會到達所有資助計劃所涵蓋的鄉村。

光纖網絡擴展工程除了令當地村民可以享用高速固網寬頻服務外，流動網絡營辦商亦可使用新網絡支援其流動網絡，在有關地區提供包括5G服務在內的高速和創新流動服務。

便利5G網絡鋪設

流動網絡營辦商在香港推展5G服務，須設置比以往幾代流動服務更多的無線電基站。為便利迅速和有效地鋪設5G網絡，通訊辦於2019年3月推行先導計劃，開放超過1 000個合適的政府場所予流動網絡營辦商安裝無線電基站，並簡化相關的審批程序及收取象徵式租金（每年港幣一元）。通訊辦已成立專責小組，負責就有關事宜協調流動網絡營辦商與相關政府部門，並發出《在先導計劃下於選定政府場地安裝無線電基站的申請須知》，闡釋該計劃下的相關原則、要求和經簡化的申請及審批程序。在「需求主導」的模式下，第二階段先導計劃於2022年1月推出，進一步開放約500個政府場所予流動網絡營辦商安裝無線電基站。截至2022年8月，政府共收到168份根據該計劃提出的申請，並已批准當中的101份申請。

industries for improving efficiency, productivity and quality of service. Under the scheme, each approved project will be subsidised for 50% of the actual cost directly relevant to the deployment of 5G technology, subject to a cap of HK$500,000. The total amount of funding earmarked for the scheme is HK$100 million.

Since its launch, the scheme has been well received with enthusiastic responses. As of 31 August 2022, a total of 152 applications had been approved, covering various sectors including construction, design, education, environmental protection, e-sports and recreation, event and exhibition, finance, logistics, medical and healthcare, property and building facilities management, repair and maintenance, sales and marketing, telecommunications, textiles, and transport.

To further encourage the public and private sectors to deploy 5G technology and foster innovation, the Government has extended the deadline for application to 31 December 2022. OFCA will continue to provide support for operation of the scheme.

Implementation of the Subsidy Scheme to Extend Fibre-Based Networks to Villages in Remote Areas

In support of the Government's policy initiative, OFCA is implementing a subsidy scheme with a funding of HK$770 million to provide financial incentives for FNOs to extend their fibre-based networks to 235 villages across nine districts in the New Territories and outlying islands. These villages are located far away from the existing fibre-based backbone networks of FNOs, where villagers can only choose broadband services delivered over copper-based networks at a speed of 10 Mbps or below.

The 235 villages are grouped under six projects (namely, Project 1 to Project 6) for tendering purpose. Selected FNOs are required to roll out fibre-based lead-in connections to the vicinity of the entrances of the villages concerned, and roll out three submarine fibre-based cables connecting Lamma Island from Hong Kong Island (under Project 5), as well as connecting Cheung Chau from Lantau Island and Peng Chau from Lantau Island (under Project 6). To introduce competition, selected FNOs are required to open up at least half of the capacity of the network facilities and submarine fibre-based cables subsidised under the scheme for use by other FNOs for free.

Following the award of all six tender projects under the scheme between November 2019 and May 2020, the selected FNOs have already extended their fibre-based networks to 67 villages as of 31 August 2022. It is expected that fibre-based networks will connect to all the villages covered by the subsidy scheme by 2026.

With the extension of the fibre-based networks, not only will the villagers concerned be able to enjoy high-speed fixed broadband services, MNOs will also be able to make use of the new networks as backhaul for their mobile networks and provide high-speed and innovative mobile services including 5G services to the areas concerned.

Facilitating the Rollout of 5G Networks

For the deployment of 5G services in Hong Kong, MNOs are required to establish a larger number of radio base stations (RBSs) as compared with previous generations of mobile services. To facilitate the expedient and effective rollout of 5G networks, OFCA launched a pilot scheme in March 2019 to open up more than 1 000 suitable government premises for MNOs to install RBSs with a streamlined approval process and nominal rental (HK$1 per year). OFCA has set up a dedicated team to coordinate with MNOs and relevant government departments on the matters concerned, and issued the "Guidance Notes for Submission of Applications under the Pilot Scheme for Installation of Radio Base Stations at Selected Government Venues" to set out the principles, requirements and streamlined procedures in respect of the applications under the scheme. In

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通訊辦亦一直與相關政府部門協調，以便利流動網絡營辦商於合適的街道裝置及公眾設施（例如公眾收費電話亭及有蓋巴士站）安裝無線電基站。我們分別於2020年4月及11月發出了《使用公眾收費電話亭安裝無線電基站以提供公共流動服務的指引》及《使用有上蓋巴士站安裝無線電基站以提供公共流動服務的指引》，以便利業界使用公眾收費電話亭和有上蓋巴士站安裝無線電基站。通訊辦會繼續與業界及相關政府部門合作，物色其他適合設置無線電基站的街道裝置和公眾設施，以及便利營辦商進行技術測試。

解決限制區的問題

- ***使3.5吉赫頻帶的頻譜短期內可在特定情況下於限制區內應用***

鑑於3.4－3.6吉赫（3.5吉赫）頻帶自2020年4月1日起已由固定衛星服務重新編配予流動服務，通訊辦協助通訊局於大埔及赤柱劃出了兩個限制區，務求使在同一頻帶和相鄰頻帶操作的遙測、追蹤及控制在軌持牌衛星的現有衛星地球站（遙測、追蹤及控制站）可與公共流動服務系統並存。因應業界的要求和持份者的意見，通訊辦進一步協助通訊局於2019年7月發出題為《於通訊事務管理局所訂立的限制區內裝設在3.4－3.6吉赫頻帶操作的無線電基站的指引》文件，以便流動網絡營辦商可在受限的情況下於限制區設置3.5吉赫無線電基站。

- ***協助撤銷大埔的「3.5吉赫限制區」***

為了全面解決大埔限制區的問題，通訊辦積極與有關衛星營辦商聯繫，商討將他們位處大埔在3.5吉赫頻帶操作的遙測、追蹤及控制站搬遷至春坎角電訊港，令流動網絡營辦商可在香港更廣泛地使用5G頻帶（包括3.5吉赫頻帶）提供5G服務。在通訊辦的協助下，其中一家衛星營辦商已獲批土地將其在大埔的遙測、追蹤及控制站遷往春坎角電訊港，而另一家營辦商則已承諾在其衛星設施安裝衛星帶通濾波器，以防止無線電干擾。

搬遷遙測、追蹤及控制站涉及複雜的土地及技術事宜，包括選址、批地、土地平整、建造工程和另建新一組的衛星天線，並要確保現有在軌衛星的操作不受影響。考慮到完成搬遷所需的時間和資源，預計可在2024年年底前撤銷大埔「3.5吉赫限制區」。現時，流動網絡營辦商正利用其他5G頻帶（例如4.9吉赫頻帶）或已透過重整現有頻譜（例如2.1吉赫頻帶）在大埔的「3.5吉赫限制區」提供5G服務。

促進無線物聯網服務和地區性無線寬頻服務／系統的發展

通訊局在2017年12月就使用920－925兆赫共用頻帶提供無線物聯網平台及服務設立了新牌照制度，至今已發出三個無線物聯網牌照。此外，現有流動網絡營辦商亦可使用根據綜合傳送者牌照指配的頻譜，採用支援大量物聯網連接的流動技術（例如窄頻帶物聯網和5G技術）提供無線物聯網服務。通訊辦會繼續協助通訊局促進無線物聯網服務在香港的發展及競爭。

January 2022, OFCA launched the second phase of the Pilot Scheme by further opening up about 500 government premises under a "demand-led" model for MNOs to install RBSs. As of August 2022, 168 applications had been received under the scheme, of which 101 were approved.

OFCA has also been coordinating with the relevant government departments to facilitate MNOs' access to suitable street furniture and public facilities such as public payphone kiosks and sheltered bus stops for the installation of RBSs. We issued the "Guidelines on the Use of Public Payphone Kiosks for the Installation of Radio Base Stations for Provision of Public Mobile Services" and the "Guidelines on the Use of Sheltered Bus Stops for the Installation of Radio Base Stations for Provision of Public Mobile Services" in April and November 2020 respectively to facilitate the industry's use of the public payphone kiosks and sheltered bus stops for installation of RBSs. OFCA will continue to work with the industry and the relevant government departments in identifying other suitable street furniture and public facilities for installation of RBSs and facilitating technical trials.

Solving of Restriction Zones Issues

- ***Enabling Controlled Deployment of Spectrum in the 3.5 GHz Band within the Restriction Zones in the Short Run***

Since the 3.4–3.6 GHz (3.5 GHz) band has been reallocated from fixed satellite service to mobile service with effect from 1 April 2020, OFCA supported the CA to delineate two restriction zones in Tai Po and Stanley to enable the coexistence of the existing earth stations for telemetry, tracking and control of the licensed satellites in orbit (TT&C stations) and systems of public mobile services operating in the same and adjacent bands. In response to the industry request and with input from the stakeholders, OFCA further supported the CA to issue the guidelines entitled "Guidelines for Installation of Radio Base Stations Operating in the 3.4–3.6 GHz Band within the Restriction Zones Delineated by the Communications Authority" in July 2019 such that MNOs can deploy 3.5 GHz RBSs within the restriction zones in a controlled manner.

- ***Facilitating the Removal of the "3.5 GHz Restriction Zone" in Tai Po***

To fully resolve the issue of the "3.5 GHz restriction zone" in Tai Po, OFCA has proactively liaised with the concerned satellite operators regarding the relocation of their TT&C stations operating at the 3.5 GHz band from Tai Po to the Chung Hom Kok Teleport, so that MNOs can make wider use of all the available 5G bands (including the 3.5 GHz band) in Hong Kong for the provision of 5G services. With OFCA's assistance, one of the satellite operators has been granted a land lot for relocation of its TT&C stations from Tai Po to the Chung Hom Kok Teleport, while the other operator has undertaken to install satellite band-pass filters at their satellite facilities to prevent radio interference.

Relocation of the TT&C stations involves complex land and technical issues, including site selection, land grants, site formation, construction works and establishment of another set of satellite antennae as well as the need to ensure that operation of the existing satellites in orbit will not be affected. Considering the lead time and effort required for completing the relocation exercise, it is expected that the "3.5 GHz restriction zone" in Tai Po can be removed before the end of 2024. In the meantime, MNOs are making use of other 5G bands (e.g. the 4.9 GHz band) or have re-farmed their existing spectrum (e.g. the 2.1 GHz band) to provide 5G services in the "3.5 GHz restriction zones" in Tai Po.

Facilitating Development of Wireless Internet of Things Services and Localised Wireless Broadband Services/Systems

Since the creation of a new licensing regime by the CA in December 2017 for the provision of Wireless Internet of Things (WIoT) platforms and services using the shared frequency band of 920–925 MHz,

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通訊辦於2019年7月設立地區性無線寬頻服務牌照，以按地區劃分的共用模式，讓業界使用27.95－28.35吉赫內的400兆赫頻譜（共用頻譜）提供創新無線寬頻服務。通訊辦已於2019年10月發出首個地區性無線寬頻服務牌照給機場管理局，以推行多項智能機場措施。

為便利不同機構使用共用頻譜設置專用的5G系統，通訊辦協助通訊局於2021年12月設立新的地區性無線寬頻系統（專用）牌照。相比地區性無線寬頻服務牌照，地區性無線寬頻系統（專用）牌照的規管方式較為寬鬆，牌照費亦較低，以對應其局限於專用及較小規模的營運模式。

通訊局公布設立新的地區性無線寬頻系統（專用）牌照。
The CA announces the creation of a new Localised Wireless Broadband System (Private) Licence.

通訊辦會處理地區性無線寬頻服務牌照及地區性無線寬頻系統（專用）牌照的新申請，以促進在大學校園、工業邨和科技園等不同地點發展創新的5G和智慧城市應用。

重新指配850兆赫、1800兆赫和2.5／2.6吉赫頻帶內的頻譜

2021年9月30日，1800兆赫頻帶內150兆赫頻譜在之前的指配期屆滿後，隨即展開為期15年的新指配期。由於1800兆赫頻帶內的部分頻譜會於重新指配後易手，通訊辦早於2019年5月成立由全部四家流動網絡營辦商代表組成的技術工作小組，以協調營辦商重新配置現有網絡及／或鋪設新網絡基礎建設的相關技術安排。通過技術工作小組的努力，1800兆赫頻帶內的頻譜已於2021年9月30日順利移交至新受配者。

2.5／2.6吉赫頻帶內的90兆赫頻譜的現有指配期將於2024年3月屆滿。此外，850兆赫頻帶內15兆赫頻譜的上一次指配期原訂於2023年11月屆滿，其受配者獲通訊局批准於2021年6月交還該頻譜。通訊局和商經局局長在2021年3月30日發出聯合聲明，公布850兆赫和2.5／2.6吉赫頻帶內的頻譜及相關頻譜使用費在現有指配期屆滿後的重新指配安排。通訊辦協助通訊局落實有關決定，通過於2021年10月舉行及完成的單一次拍賣，重新指配850兆赫和2.5／2.6吉赫頻帶內的105兆赫頻譜，以及指配700兆赫和4.9吉赫頻帶內的150兆赫新頻譜。根據拍賣結果，850兆赫頻帶內的15兆赫頻譜已於2021年12月重新指配，而2.5／2.6吉赫頻帶內的90兆赫頻譜將於2024年3月現有指配期屆滿後重新指配。

three WIoT licences have been issued. In addition, the existing MNOs may also make use of the frequency spectrum assigned to them under the Unified Carrier Licence to provide WIoT services by adopting mobile technologies such as Narrowband Internet of Things (IoT) and 5G technologies that enable massive IoT connections. OFCA will continue to support the CA to facilitate the development and competitive supply of WIoT services in Hong Kong.

The Localised Wireless Broadband Service Licence (LWBS Licence) was created in July 2019 to enable the use of 400 MHz of spectrum in the frequency range of 27.95–28.35 GHz on a geographically shared basis (Shared Spectrum) for the provision of innovative wireless broadband services. The first LWBS Licence was issued to the Airport Authority in October 2019 for implementation of smart airport initiatives.

In order to facilitate the use of the Shared Spectrum for the establishment of 5G systems for private use by different entities in the community, OFCA supported the CA to create the Localised Wireless Broadband System (Private) Licence (LWBS (Private) Licence) in December 2021. The LWBS (Private) Licence is subject to a more light-handed regulation and lower level of licence fee compared with LWBS Licence, given that its scope of operation is limited to private use and is of a smaller scale.

OFCA will process new applications for LWBS Licence and LWBS (Private) Licence with a view to facilitating the development of innovative 5G and smart city applications at different locations, such as university campuses, industrial estates and technology parks.

Re-assignment of Frequency Spectrum in the 850 MHz, 1800 MHz and 2.5/2.6 GHz Bands

On 30 September 2021, a new 15-year term of assignment commenced for 150 MHz of spectrum in the 1800 MHz band upon expiry of the previous term. As some of the spectrum in the 1800 MHz band would change hands upon re-assignment, OFCA convened a technical working group as early as in May 2019 comprising representatives of all four MNOs to coordinate the relevant technical arrangements to reconfigure their existing networks and/or roll out additional network infrastructures. Through the efforts of the technical working group, the spectrum in the 1800 MHz band was smoothly handed over to the new assignees on 30 September 2021.

The current assignment of 90 MHz of spectrum in the 2.5/2.6 GHz band will expire in March 2024. Separately, 15 MHz of spectrum in the 850 MHz band, with the previous assignment originally due to expire in November 2023, was returned by the spectrum assignee in June 2021 upon approval granted by the CA. Following the issue of the joint statements by the CA and SCED on 30 March 2021 announcing the arrangements for re-assignment of the spectrum in the 850 MHz and 2.5/2.6 GHz bands and the related SUF upon expiry of the existing assignments, OFCA assisted the CA in implementing the decisions to re-assign 105 MHz of spectrum in the 850 MHz and 2.5/2.6 GHz bands, together with assignment of 150 MHz of new spectrum in the 700 MHz and 4.9 GHz bands, by way of a single auction held and concluded in October 2021. Pursuant to the auction results, 15 MHz of spectrum in the 850 MHz band was re-assigned in December 2021, while 90 MHz of spectrum in the 2.5/2.6 GHz band will be re-assigned upon the expiry of the existing assignments in March 2024.

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確保可適時供應合適的頻譜以應付新興無線電通訊服務的需要

通訊辦一直緊貼電訊業的全球發展趨勢，並參與國際電信聯盟及亞太地區電信組織等相關組織舉辦的國際／地區會議。通訊辦透過各種正式和非正式渠道，一直與香港業界人士保持溝通， 密切留意電訊業的發展。通訊辦成立了內部專責小組統籌頻譜供應事宜，以期早日展開頻譜策劃的工作，並確保可適時釋放合適的頻譜，以應付新興無線電通訊服務的需求和便利公共流動（包括5G）服務的持續發展。經考慮通訊辦的建議後，通訊局於2022年2月公布了2022年至2024年的頻譜供應表，向業界公布未來三年擬供應作公共流動及／或其他無線電通訊服務用途的無線電頻譜。

落實《電訊條例》的修訂項目

在通訊辦的支援下，商經局完成對《電訊條例》下有關電訊規管架構的檢討。《2021年電訊（修訂）條例》（《修訂條例》）於2022年6月24日開始實施，修訂《電訊條例》的相關條文以落實上述檢討所建議的四項主要措施，包括訂明通訊局規管智能產品電訊功能的權力、加強保護地下電訊基建設施、簡化發牌機制以便利推出創新的服務，以及改善《電訊條例》下的上訴機制。

根據《電訊條例》新訂的第18A條，任何人在地下電訊線路附近進行任何低於地面的工作時沒有採取合理步驟保護或沒有防止地下電訊線路受損，即屬刑事罪行。就這方面，通訊辦協助通訊局於2022年2月25日發出《有關在地下電訊線路附近工作的指引》（《指引》），為有關持份者提供實務指引，以符合第18A條的規定。根據《指引》，施工者須委聘一名合資格人士進行地下電訊線路探測工作。為此，通訊辦聯絡香港建造學院及香港專業教育學院，兩家機構自2022年3月起提供相關訓練課程。申請人如完成訓練並達到相關資歷要求，可向通訊辦申請成為合資格人士，有關合資格人士名單已在通訊辦網站公布。

根據《修訂條例》，電訊上訴委員會正式成立，以取代舊有的電訊（競爭條文）上訴委員會。電訊上訴委員會除有權處理通訊局就持牌人從事《電訊條例》第7Q條所指具剝削性的行為而作的決定外，亦會處理通訊局根據《電訊條例》作出的某些決定。

管理緊急警示系統以迅速發放緊急政府訊息

政府委聘四家本地流動網絡營辦商設立緊急警示系統，讓政府可在緊急情況下（例如不可預見的極端天氣情況）透過流動網絡營辦商的流動網絡發出緊急訊息，提醒市民盡快採取應變措施。2022年3月9日，政府首次使用緊急警示系統向全港市民發出緊急訊息。通訊辦會繼續監察流動網絡營辦商在運作及維護緊急警示系統方面的工作，並在有需要時協助不同政策局／部門通過有關系統發放緊急訊息。

Ensuring Timely Supply of Suitable Spectrum to Meet the Needs of Emerging New Radiocommunications Services

OFCA keeps up with worldwide development trends in telecommunications and participates in related international/regional meetings of the International Telecommunication Union and Asia-Pacific Telecommunity, among others. Through various formal and informal channels, OFCA has been maintaining dialogue with the industry players in Hong Kong to keep abreast of the development of the telecommunications industry. An in-house task force on spectrum supply has been set up in OFCA to collate efforts with a view to conducting early spectrum planning work and ensuring timely release of suitable spectrum to meet the demands of emerging new radiocommunications services and facilitate the ongoing development of public mobile (including 5G) services. Taking into account OFCA's recommendations, the CA issued the Spectrum Release Plan for 2022–2024 in February 2022 to inform the industry of the potential supply of spectrum for provision of public mobile and/or other radiocommunications services in the coming three years.

Implementation of Amendments to the Telecommunications Ordinance

With OFCA's support, the CEDB completed the review of the telecommunications regulatory framework under the TO. The Telecommunications (Amendment) Ordinance 2021 (Amendment Ordinance) came into operation on 24 June 2022 and amended relevant provisions of the TO to implement four major measures proposed in the above review, namely stipulating the powers of the CA on regulating the telecommunications functions of smart devices, strengthening the protection of underground telecommunications infrastructure, simplifying the licensing framework to facilitate the introduction of innovative services and improving the appeal mechanism under the TO.

Under the new section 18A of the TO, it is a criminal offence for any person not to take reasonable steps to protect or fails to prevent damage to an underground telecommunications line when carrying out any work below ground level near the line. In this regard, OFCA assisted the CA to issue the "Guidelines on Work near Underground Telecommunications Lines" on 25 February 2022 (the Guidelines) to provide relevant stakeholders with practical guidance for compliance with section 18A. According to the Guidelines, the working party shall appoint a competent person to carry out the detection work for the underground telecommunications lines. In this connection, OFCA has liaised with two training course providers, namely the Hong Kong Institute of Construction and the Hong Kong Institute of Vocational Education, to offer relevant training courses since March 2022. Applicants who have completed the training and met the relevant qualification requirements may apply to OFCA to become competent persons. The list of competent persons is published on OFCA's website.

Pursuant to the Amendment Ordinance, the Telecommunications Appeal Board (TAB) is formally set up to replace the previous Telecommunications (Competition Provisions) Appeal Board. In addition to dealing with decisions of the CA in relation to exploitative conduct engaged by licensees under section 7Q of the TO, the TAB will also handle certain decisions of the CA under the TO.

Administration of the Emergency Alert System for Prompt Dissemination of Time-Critical Messages of the Government

The Government engaged the four local MNOs to set up an emergency alert system (EAS), enabling the Government to send time-critical messages via the MNOs' mobile networks to alert the public to take contingency measures as soon as possible

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落實電話智能卡實名登記制

《電訊（登記用戶識別卡）規例》（《登記規例》）於2021年9月1日正式生效，以落實執行電話智能卡實名登記制（實名登記制）。

通訊辦協助通訊局制訂並於2021年8月20日發出《實施電話智能卡實名登記制度的指引》（《登記指引》），就實名登記制的實施為持牌人提供實務和行政指引。

通訊辦一直透過定期聯絡會議與持牌電訊商緊密聯繫，確保其登記系統簡單易用並合乎《登記規例》的要求。就五家持牌電訊商未能按照《登記指引》規定及時設立電子登記系統一事，通訊局在考慮過通訊辦的評估及有關電訊商的申述後，於2022年3月8日向該五家持牌電訊商發出指示，要求他們作出糾正。五家持牌電訊商的其中四家隨後已遵從指示，並獲通訊局信納其已建立電子登記系統。至於餘下一家未有遵從通訊局指示的電訊商，通訊局在2022年4月7日發出通知，由2022年6月7日起暫時吊銷其牌照中透過電話智能卡要約提供的本地流動服務，為期12個月。

為確保電話智能卡實名登記制有效落實，通訊辦於深水埗區進行市場巡察行動。

OFCA conducted market surveillance in Sham Shui Po District to ensure effective implementation of the Real-name Registration Programme for SIM Cards.

除上述執法工作外，通訊辦亦採取其他持續跟進行動，以確保實名登記制有效實施，例如於持牌電訊商的電子登記平台進行登記測試、於市場上進行巡查行動，以及檢查有關登記記錄。

通訊辦已設立專題網站（https://www.ofca.gov.hk/simreg）及熱線電話（2961 6699），以加強公眾對實名登記制的認識。此外，通訊辦亦協助商經局推出一系列宣傳項目，包括宣傳短片、海報、單張等等，呼籲市民盡早為其電話智能卡完成登記。為照顧有需要的社羣，尤其是長者，通訊辦亦協助於18間指定郵政局開設服務櫃位，為市民完成登記，以及向相關的非政府機構進行簡介。

通訊辦會密切留意登記狀況，如有需要會加強宣傳及支援措施，以確保用戶可按《登記規例》在法定限期即2023年2月23日或之前為其電話智能卡完成實名登記。

完善要約提供電訊服務類別牌照登記制度

要約提供電訊服務類別牌照（類別牌照）旨在規管在沒有設置任何電訊設備的情況下向公眾要約提供電訊服務的人士。根據《管理要約提供電訊服務類別牌照的指引》（《類別牌照指引》）之前的版本，只有付費客戶的數量達10 000或以上的類別牌照持有人才須向通訊局登記。為配合實施實名登記制，通訊辦協助通訊局更新《類別牌照指引》，要求所有擬在業務運作中要約提供智能卡服務的類別牌照持有人，不論客戶數量多寡，均須於開始要約提供智能卡服務前向通訊局登記其資料。為便利類別牌照持有人根據完善後的規定向通訊局登記，通訊局推出了自動化電子平台，讓持牌人可經網上提交和更新其業務資料。截至2022年3月31日，56名類別牌照持有人已完成登記。通訊辦會繼續協助通訊局確保完善後的類別牌照登記制度運作暢順。

during emergency situations, such as unforeseen extreme weather conditions. On 9 March 2022, the Government used the EAS for the first time to disseminate an emergency message to the public. OFCA will continue to monitor MNOs' operation and maintenance of the EAS, and assist different bureaux/departments in disseminating emergency messages via the EAS as necessary.

Implementation of Real-name Registration Programme for SIM Cards

The Telecommunications (Registration of SIM Cards) Regulation (the Registration Regulation) took effect on 1 September 2021 to implement the Real-name Registration Programme for SIM cards (Real-name Registration Programme).

OFCA assisted the CA in the formulation and issue of the "Guidelines on Implementation of Real-name Registration for SIM Cards" (the Registration Guidelines) on 20 August 2021 to provide practical and administrative guidance to licensees for implementation of the Real-name Registration Programme.

OFCA has been closely liaising with the licensees through the regular liaison meetings to ensure that their real-name registration systems are simple and easy to use and in compliance with the Registration Regulation. For five licensees which had failed to put in place in a timely manner an electronic registration system in accordance with the Registration Guidelines, the CA, having considered OFCA's assessment and the licensees' representations, issued directions to the five licensees on 8 March 2022 for rectification. Four out of the five licensees subsequently complied with the directions to the satisfaction of the CA. As for the remaining licensee which did not comply with CA's direction, the CA issued a notice on 7 April 2022 to suspend its licence in respect of offering local mobile service through SIM cards for a period of 12 months with effect from 7 June 2022.

Apart from the above enforcement work, OFCA has also undertaken other on-going follow-up actions to ensure the effective implementation of the Real-name Registration Programme, such as registration testing of licensees' electronic registration platforms, surveillance inspections in the market and inspections of the registration records.

OFCA has set up a thematic website (https://www.ofca.gov.hk/simreg) and hotline (2961 6699) to enhance public awareness of the Real-name Registration Programme. In addition, OFCA also supported CEDB in rolling out a host of publicity materials such as APIs, posters, leaflets, etc. to appeal to the public for early registration of their SIM cards. To cater for the needy groups in particular the elderly, OFCA has also assisted in setting up service counters at 18 designated post offices for helping members of the public to complete registration and conducted briefings to relevant non-governmental organisations.

OFCA will closely monitor the registration situation and step up publicity and support measures where necessary so as to ensure that users can complete real-name registration for their SIM cards in accordance with the Registration Regulation and before the statutory deadline of 23 February 2023.

Enhancement of the Registration System for Class Licence for Offer of Telecommunications Services

The Class Licence for Offer of Telecommunications Services (CLOTS) regulates persons who offer telecommunications services to the general public without the establishment of any means of telecommunications. Under the previous version of the "Guidelines for Administration of CLOTS" (CLOTS Guidelines), only CLOTS licensees with a customer base of 10 000 subscriptions or more were required to register with the CA. To tie in with the implementation

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設立類別牌照以規管用於無線區域網絡的6吉赫器件的使用和營商活動

隨着技術發展，新近面世的無線區域網絡器件可在5925－6425兆赫頻帶操作（例如俗稱的Wi-Fi 6E器件，並統稱為「6吉赫器件」），支援更高速、更低時延的數據傳輸，從而發揮更佳性能。為引入6吉赫器件到香港，通訊辦協助通訊局在2021年11月至12月期間進行公眾諮詢，就設立類別牌照以規管用於無線區域網絡的6吉赫器件的使用和營商活動，並更改現行提供公共無線區域網絡服務類別牌照，以容許6吉赫器件用作提供公共無線區域網絡服務的事宜，邀請業界及有興趣人士發表意見。經考慮公眾諮詢所收到的意見，通訊局已於2022年4月頒布設立和更改相關6吉赫器件類別牌照的決定。

同意和記電話有限公司逐步終止第二代流動（2G）服務

通訊辦接獲和記電話有限公司（和記）申請要求通訊局批准其在2021年9月停止提供2G服務。根據相關牌照條件，流動網絡營辦商必須令通訊局信納受影響的客戶得到妥善及適當的安排，方可停止提供某一代的流動服務。通訊辦協助通訊局審批和記的申請。經考慮各項相關因素，包括受是次終止2G服務影響的客戶所佔比例極低、和記為鼓勵受影響的客戶轉用較新世代的流動服務提供了優惠方案、為選擇不繼續使用服務的客戶提供良好的終止服務安排，以及給予受影響客戶充分時間的通知和客戶服務支援後，通訊局於2021年7月就和記由2021年9月30日起全面終止提供2G服務給予同意。和記亦如期終止其2G服務。

繼續檢討和簡化規管方式

通訊辦一直協助通訊局維持有效的規管制度以便利電訊業的商業運作，並推出緊貼電訊科技發展、有助提升運作效率的簡化措施。年內，通訊辦協助通訊局就相關持牌人須遵守的會計常規進行檢討，以期簡化呈交報告的要求，從而減輕業界的合規成本。在落實採用經簡化的報告要求前，通訊辦會進一步協助通訊局諮詢業界。

of the Real-name Registration Programme, OFCA assisted the CA to update the CLOTS Guidelines to require all CLOTS licensees intending to offer SIM services during the course of business, irrespective of the size of their customer base, to register their information with the CA before commencing the offer of SIM services. To facilitate CLOTS licensees to register with the CA under the enhanced requirements, an automated electronic platform was launched to allow the licensees to submit and update their business information online. As of 31 March 2022, 56 CLOTS licensees had been registered. OFCA will continue to assist the CA to ensure smooth operation of the enhanced registration system for CLOTS.

Creation of a Class Licence for Regulating the Use of and Trade in 6 GHz Devices for Wireless Local Area Network

With the advent of technology, there are emerging new Wireless Local Area Network (WLAN) devices operating in the 5925 – 6425 MHz band (such as the commonly known Wi-Fi 6E devices and collectively referred to as "6 GHz devices") which support better performance in terms of faster data rates and lower latency. To enable the introduction of 6 GHz devices into Hong Kong, OFCA assisted the CA to conduct a public consultation during November and December 2021 to solicit views of the industry and interested parties on the creation of a class licence for regulating the use of and trade in 6 GHz devices for WLAN and variation to the existing class licence for provision of public WLAN services to allow the use of 6 GHz devices for provision of public WLAN services. Taking into account the feedback received in response to the public consultation, the decisions on the creation and variation of class licences for 6 GHz devices were promulgated by the CA in April 2022.

Consent Granted to Hutchison Telephone Company Limited to Phase Out 2G Services

OFCA received an application from Hutchison Telephone Company Limited (Hutchison) seeking the CA's approval to cease its provision of 2G services in September 2021. Under the relevant licence condition, MNOs are required to make proper and appropriate arrangements for the affected customers to the satisfaction of the CA before ceasing to provide a generation of mobile service. OFCA assisted the CA in vetting Hutchison's application. The CA granted consent in July 2021 to Hutchison to cease the provision of all its 2G services starting from 30 September 2021, having taken into account relevant considerations including the extremely low percentage of customers to be affected by the 2G service cessation; incentive offers provided by Hutchison to the affected customers to migrate to a higher generation of mobile services; favourable termination arrangements for those who chose not to continue the subscription; and sufficient time of notification and customer support to the affected customers. Hutchison ceased its 2G services as scheduled.

Continuing to Review and Streamline Regulatory Practices

As part of the ongoing effort to maintain an effective regulatory regime conducive to the business operation of the telecommunications industry, OFCA has been supporting the CA to introduce streamlining measures to keep up with the advancement of telecommunications technologies and help enhance operational efficiency. During the year, OFCA assisted the CA to conduct a review of the accounting practices the relevant licensees are required to follow, with a view to streamlining the reporting requirements, thereby reducing the industry's compliance cost. OFCA will further assist the CA to consult the industry before adopting the streamlined reporting requirements for implementation.

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檢討根據全面服務責任提供的公眾收費電話機數目

公眾收費電話機服務是基礎電話服務之一，由全面服務供應商按其全面服務責任提供。在全面服務責任下提供公眾收費電話機服務所需的成本，由固定及流動服務營辦商分擔。鑑於對公眾收費電話機服務的需求近年持續減少，通訊辦協助通訊局於2017年至2019年期間進行檢討，以決定在全面服務責任下的公眾收費電話機的合理數目。

就室內公眾收費電話機而言，通訊局決定從全面服務責任中剔除515個電話機（約佔室內公眾收費電話機總數的35%）。全面服務供應商已將所有被剔除的室內公眾收費電話機移除。另外，通訊局決定從全面服務責任中剔除765個電話亭公眾收費電話機（約佔電話亭公眾收費電話機總數的50%）。截至2022年3月，超過96%被剔除的電話亭公眾收費電話機已經被移除。

固網寬頻服務的發展

隨着固網營辦商持續鋪設網絡，香港大眾得以享用廣泛覆蓋全港並採用各種技術提供的寬頻服務。截至2022年3月，香港約有290萬住宅及商業固網寬頻用戶，住戶滲透率為98%。目前寬頻服務的速度可高達每秒10吉比特。大約86%的固網寬頻用戶使用速度達每秒100兆比特或以上的寬頻服務。

根據歐洲光纖到戶議會於2022年5月發出的報告，香港住戶連接光纖到戶／光纖到樓的滲透率在全球84個經濟體系中排名第五。

新的海底電纜系統在香港登陸

在通訊辦提供的綜合聯絡服務的協助下，一個新的海底電纜系統，即海南 — 香港國際海纜（H2HE）由2021年9月起開始運作，而多個新的區域或洲際海底電纜系統和四個本地海底電纜系統亦正在興建中，並擬於2022年至2024年期間投入服務。通訊辦將繼續協助營辦商申請新的海底電纜系統在香港興建及登陸所需的法定許可。

協助在春坎角電訊港的土地建設對外電訊設施進行招標

為加強香港作為區域電訊樞紐的角色，並滿足香港在對外電訊設施方面日益殷切的需求，通訊辦一直與相關的決策局及部門合作，在春坎角電訊港提供合適土地供對外電訊基建設施之用，以期進一步提升香港對外電訊網絡的整體容量和分流能力。地政總署進行招標工作後，於2022年4月向中標者批出一幅位於春坎角電訊港的土地；另一幅可供使用的春坎角電訊港土地於2022年6至7月期間進行招標。

Review of the Number of Public Payphones under the Universal Service Obligation

Public payphone service is a form of basic telephone service which the universal service provider (USP) is required to provide under its universal service obligation (USO). The cost of providing a public payphone service subject to the USO is shared by the fixed and mobile services operators. In view of the diminishing demand for public payphone service in recent years, OFCA supported the CA to conduct a review of the reasonable number of public payphones that should be subject to the USO from 2017 to 2019.

For in-building type public payphones, the CA decided to exclude 515 in-building type public payphones (about 35% of the total number of in-building type public payphones) from the USO. All the excluded in-building type public payphones have been removed by the USP. For kiosk type public payphones, the CA decided to exclude 765 kiosk type public payphones (about 50% of the total number of kiosk type public payphones) from the USO. As of March 2022, over 96% of the excluded kiosk type public payphones had been dismantled.

Development of Fixed Broadband Services

With the continuous network rollout of FNOs, the Hong Kong community can enjoy nearly ubiquitous coverage of broadband networks deploying various technologies. As of March 2022, there were around 2.9 million residential and commercial fixed-broadband subscriptions, with a household penetration rate of 98%. Broadband services are now available at speeds of up to 10 Gbps. Around 86% of the fixed broadband subscriptions are supported by broadband services with speeds of 100 Mbps or above.

According to a report issued by the Fibre to the Home Council Europe in May 2022, Hong Kong was ranked fifth worldwide in fibre to home/building household penetration among the 84 economies under comparison.

Landing of New Submarine Cable Systems in Hong Kong

With the support of OFCA's single-point-of-contact service, a new submarine cable system, Hainan to Hong Kong Express (H2HE), was put into service in September 2021, and several new regional or transcontinental submarine cable systems as well as four domestic systems are under construction and scheduled to be put into service between 2022 and 2024. OFCA will continue to assist operators in applying for the necessary statutory approvals for the construction and landing of new submarine cable systems in Hong Kong.

Facilitating the Tender of Land Lots in Chung Hom Kok Teleport for Construction of External Telecommunications Facilities

In order to reinforce Hong Kong's role as a regional telecommunications hub and meet the growing demand for external telecommunications facilities in Hong Kong, OFCA has been working with the relevant bureaux and departments to make available suitable land lots in the Chung Hom Kok Teleport for external telecommunications infrastructure, so as to further enhance the overall capacity and diversity of Hong Kong's external telecommunications networks. Following a tender exercise conducted by the Lands Department, a land lot at Chung Hom Kok Teleport was granted to the successful tenderer in April 2022. Tender for disposal of another land lot at Chung Hom Kok Teleport was conducted between June and July 2022.

3 迎接電訊市場新挑戰
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評估用作電話機樓及其他電訊相關設施的批地使用情況

政府批予電訊營辦商用作設置和營運電話機樓及其他電訊相關設施的42幅批地契約將於2025年屆滿。為協助政府考慮現行地契年期屆滿後處理該等用地的未來路向，通訊辦委聘顧問公司進行研究，以檢討現時該等用地的使用情況，並根據顧問公司的研究結果對有關用地進行技術評估。通訊辦會繼續就此事從電訊政策的角度向政府提供支援和意見。

就無線電基站進行非電離輻射安全技術研究

通訊辦協助通訊局就無線電基站（包括5G無線電基站）進行非電離輻射安全顧問研究。該項研究審視有關非電離輻射技術事宜，尤其是採用大規模多輸入多輸出天線等新技術的5G無線電基站，檢討在不同無線電基站配置情況下評估非電離輻射的方法和現行的規管措施，並就控制無線電基站輻射安全所應採取的實際措施提出建議，以促進公共流動服務的持續發展。該項研究於2021年4月展開，並已於2022年6月完成。

香港衞星網絡的發展

衞星頻譜和軌道位置屬珍貴天然資源。在香港註冊的通訊衞星在使用該等資源時須符合國際電信聯盟的協調及通知規定。就此，通訊辦支援香港持牌衞星營辦商不時與外國當局協調，並協助處理有關操作在軌衞星的牌照事宜。現時共有九枚在軌衞星由香港兩家提供衞星通訊服務的持牌公司操作。

制訂和執行電訊標準

通訊辦密切監察電訊技術標準化的國際發展趨勢，並更新本地技術標準，以滿足業界和公眾需要。在2021／22年，通訊局批准和發出了六項涵蓋單標準和多標準5G基站，以及支援5G獨立組網及非獨立組網的用戶電訊設備的經修訂技術標準。

現時，合資格的本地和海外測試實驗室根據通訊局訂定的技術標準為各種電訊設備提供測試和驗證服務，而獲通訊局認可為本地認證機構的本地實驗室更可提供全面的電訊設備測試和驗證服務。在2021／22年，本地和海外認證機構簽發了527份設備認證，以應付電訊設備市場需求。

為確保所有提供電訊設備測試和驗證服務的本地認證機構符合通訊辦規定的服務質素及表現標準，通訊辦會繼續密切監察認證機構的表現，包括定期查核文件、視察實驗場所和檢查他們的工作。目前，所有本地認證機構的表現均符合通訊辦訂明的要求。

Assessing the Use of the Sites Granted for Telephone Exchanges and Other Telecommunications-Related Facilities

The land leases of 42 sites granted to telecommunications operators for establishing and operating telephone exchanges and other telecommunications-related facilities will expire in 2025. To facilitate the Government's consideration of the way forward for handling these sites upon lease expiry, OFCA commissioned a consultancy study to review the current use of these sites and conducted a technical assessment of these sites based on the outcome of the consultancy study. OFCA will continue to provide support and advice to the Government on the matter from the telecommunications perspective.

Conduct of a Technical Study on Non-Ionising Radiation Safety of Radio Base Stations

OFCA assisted the CA to conduct a consultancy study on non-ionising radiation (NIR) safety of RBSs, including 5G RBSs. The study examined technical matters in relation to NIR, in particular those for 5G RBSs employing new technology like massive multiple-input-multiple-output antennas, reviewed the methodology for assessment of NIR for different RBS deployment scenarios and the existing regulatory measures, and made recommendations on practical measures to control the radiation safety of RBSs so as to facilitate the on-going development of public mobile services. The study was commenced in April 2021 and completed in June 2022.

Development of Hong Kong's Satellite Networks

Satellite spectrum and orbital positions are scarce natural resources. The use of these resources by communications satellites registered in Hong Kong should comply with the coordination and notification requirements of the International Telecommunication Union. In this regard, OFCA supports the licensed satellite operators of Hong Kong to coordinate with foreign administrations from time to time, and assists in the processing of licences for the operation of satellites in space orbits. There are now nine satellites in orbit operated by two Hong Kong companies licensed to provide satellite communications services.

Setting and Enforcing Telecommunications Standards

OFCA closely monitors international developments in telecommunications standardisation and updates local technical standards in order to meet the needs of the industry and the public. In 2021/22, six revised technical standards covering single-standard and multi-standards 5G base stations and user equipment supporting 5G standalone and non-standalone operation were approved and issued by the CA.

Qualified local and overseas testing laboratories are now providing testing and certification services for various kinds of telecommunications equipment against technical standards prescribed by the CA. In particular, local laboratories accredited by the CA as local certification bodies (LCBs) offer a full range of telecommunications equipment testing and certification services. In 2021/22, LCBs and foreign certification bodies issued 527 equipment certificates to meet the needs of the telecommunications equipment market.

To ensure that all LCBs providing telecommunications equipment testing and certification services meet the service quality and performance standards required by OFCA, OFCA will continue to closely monitor their performance by regularly conducting documentary checks, plant visits and reviews. So far, all LCBs have been performing up to the requirements set by OFCA.